TNE007

Supplement M10 Meshan Sector Serkur in The New Era

History of The Imperium Working Group

New Zealand

FSpace Publications

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Preamble

This publication is a copy of the original text and maps Philip Warnes created for HIWGNZ in 1995. It was for the Meshan Sector during the New Era, and covered ones of the worlds found there during that period. Some of this appeared in some issues of *The Meshan Saga*, while others appeared online and on HIWG documents archives/CDs.

He presented both the history of the world and it's current state for the TNE dateline. He went on to produce other documents for this world and further world documents.

This publication brings all the pieces together in one place. It is republished here to preserve the work in a viable modern format, ensure the copyright of the author is asserted and to provide a context alongside other Meshan Sector documents that are being made available.

Philip became part of the editorial team for a Classic Era Meshan Sector project formally licenced by FSpace Publications from Marc Miller.While this project hit it's third rewrite on the first sector book, it crashed and burned when the key author walked away from the project and publisher forever.

Serkur and similar material was evaluated for reuse and some of it has made it's way into *FSpaceRPG*. Serkur has a mention in the Library Data entries, and Tarros (Serkur's moon) features in one of the *Federation Times* issues.

The *Far Frontiers* and *Far Encounters* product brands were envisaged by FSpace Publications to provide more generic science fiction supplements. And within them was an opportunity to repurpose older manuscripts.

Philip Warnes jumped at the chance to be involved and rewrote his Serkur material to become *Far Frontiers: Serkur*. The book has a cropped version of the original cover art designed to depict a scene on Serkur and one of Philip's tank designs.

The content of the *F.F. Serkur* changed from the original HIWGNZ documents, and has a different plot arc for origins of the New Estates computer virus, diverging it away from the New Era.

Even the crashed ship depicted in that book has had various things altered from the original artwork.

For now, this publication (in the format presented here) will be found in non-commercial releases by FSpace Publications directly, or as part of the publication collections found on FSpace DVDs released from 2019 onwards. It will also be viewable at the New Zealand National Library.

This publication will help alongside *Far Frontiers Serkur* to paint a picture of how to use and place the world in the Meshan Sector. The cover of this depicts a Defender MBT and Rhylorian troops - what is cropped off is a Vargr amongst them - part of an incomplete future story arc.

At some point in the future this publication will be made available to future registered purchasers of *Far Frontiers Serkur*.

Rhylos City presented in this book later became known as New Washington in the Far Frontiers version of this world. The crashed Kisiidi ship was originally defined as a 400 ton Anvil, but artwork later done for Meshan Serkur showed the vessel as of Vargr origin and survivors emerging of both Human and Vargr racial origin (no Droyne). These changes were not compelted reflected in the manuscript in this publication. Some adaptations of the Virus on Serkur have been made to make work by Philip and Martin on this topic cohesively gel together here, as opposed to remaining a set of discussion paper notes.

s:IA

Gayon System Stats

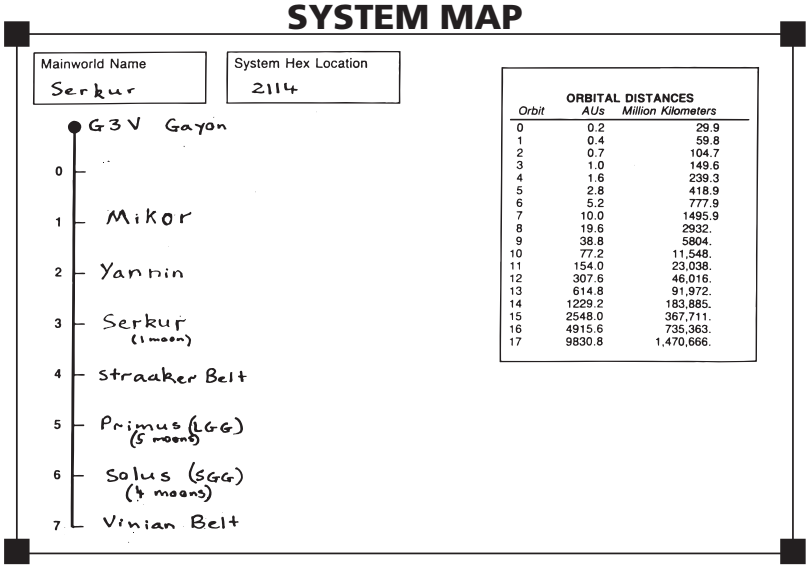
Planetary Stats (circa 1200)

Location	2114, Meshan Sector, Subsector G, Varson				
Serkur	2114	X364873-7	Ri Ag Bk	722	Na G3V

System Stats

Orbit	Name	UPP	Remarks
Primary	Gayon	G3V	
1	Mikor	Y400000-0	
2	Yannin	Y9A0000-0	Pure N_2 atmosphere
3	Serkur	X364873-7	Ri, Ag, Bk
30	Tarro	Y100000-0	Tidelocked moon
4	Straaker Belt	Y000000-0	Asteroid belt
5	Primus	Large GG	150,000km diameter
5	Lucon	Y100000-0	\ inside
7	Galamish	Y200000-0	| radiation
10	Toa	Y300000-0	/ belt
15	Tremmin	Y6A7000-0	Std pressure atmosphere
25	Cello	Y3A1000-0	Thin pressure atmosphere
6	Solus	Small GG	50,000km diameter
1	Rings	Y000000-0	moderate size
9	Sid	Y100000-0	dirty snowball
12	Po	Y220000-0	Trace N_2 atmosphere
15	Yo	Y100000-0	dirty snowball
7	Vinian Belt	Y000000-0	Asteroid belt

SYSTEM MAP



Serkur Physical Parameters

At time of collapse Serkur was TL 4 but has advanced 3 tech levels as a result of a major civil war between the Nortwest and Southern industrial regions over a ten year period after the collapse (the war was on at the time of the collapse - hence a red zone classification). Inspired and organised leadership, and an efficient, progressive government in a cold war setting has since pushed the indigenous tech level up at a rapid pace. Also a cold war between the three industrial centers/ super powers.

Diameter	4800km
Atmosphere	Standard
Hydrgraphic percentage	40%
Dense planet - Surface gravity	0.8 Earth
	(jump/throw modifier=1.1)
Albedo	0.24
Average Global temperature	18°C (-40°C to +40°C)
Cloudiness	20%
Year	368.958 standard days
	421.7 local days
Day	21 hours
Types or terrain present	- Cultivated land (predominant)
	- Desert
	- Ice-caps (at poles)
	- Water (Great Ocean Basin, Chunking Sea)
	- City/Urban
	- Rainforest
	- Mountains

Serkur's Sun - Gayon

Spectral Class	G3V (Yellow main sequence)
Bolometric magnitude	4.948
Luminosity	0.89
Surface temperature	5700°C
Stella radius	0.958
Stella mass	0.98

Gayon is slightly cooler than the sun but Serkur is just as warm as Earth because it makes up for less insolation with a lower albedo (reflectivity).

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Tarro - Serkur's moon

Radius	Size 1
Distance	72,000km
Lunar month	8.60 local days
	7.53 standard days
Lunar Day	same as month due to tide lock
	49.02 lunar months per year

Local calender

A year is broken into ten months. The tenth month is shorter than the others. Every third year is a leap year.

Normal months

9/9/9/9/7

Short month

9/9/9/8

Serkur Temperature Calc

Serkur's start is a magnitude G3V. According to Book 6 Scounts, the Bolometric magnitude for a G0V star is 4.57 while a G5V is 5.20.

The extrapolated Bolomtric magnitude for a G3V star is therefore 4.948

By the same process, the other stellar characteristics are:

Stellar luminosity	0.89
Effective stellar temperature	5700°C
Stellar radius	0.958
Stellar mass	0.98

Serkur is a size 3 world ~ 4800km (Mars size). It has a standard atmopshere, however a planet of this size would normally be unable to retain such an atmopshere for an appreciable length of time by natural means. The solution to the problem is to make Serkur a desnse planet giving it a surface gravity of 0.8 of Earth (Jump/Throw distancese x 1.1).

Other physical parameter's of Serkur

Volume	0.053 Earth
Surface area	0.141 Earth
Albedo	0.234 (calculated below)
Axial Tilt	20°
Average temperature	18.5°C (see below)
Standard Atmosphere	+10% greenhous effect
Cloudiness	20% of planet covered

Albedo calculation

The formula for calculating this is in Book 6 Scouts page 47.

Geographic feature	% Surface	Albedo	% Surface v Albedo
Cloud	20%	0.5	0.1
Ice	10%	0.55	0.055
Land	50%	0.15	0.075
Water	20%	0.02	0.004
Resultant Calculated Albedo =		0.234	

Albedo was eventually fudged as 0.2 (Earth is slightly higher).

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Calculating Temperature with Albedo

Te = 345.6 + (288 x G) - (288 x A) (derived from White Dwarf article)

= 345.6 + (288 x 0.1) - (288 x 0.2)

= 316.8°K

T = (Ta x $L^{1/4}$)/$D^{1/2}$ (derived from White Dwarf article)

= (316.8 x $(0.89)^{1/4}$)/$1^{1/2}$

= 296.5°K

= 18.5°C

where T = Global temperature

Te = Temperature of a planet if 1 AU from a star with Stellar luminosity of 1

L = Stellar luminosity

D = Distance from star in AUs (Astronomical Units)

G = Greenhouse effect

A = Albedo

Essentially we first calculate the temperature of a planet if it was in Earth's orbit, then take into account the actual star and position from the stellar primary.

This formula from a White Dwarf article is used because the one given in Book 6 Scouts is wrong.

Albedo can be fudged downward from calculated value of 0.234 to 0.2 by reducing the reflectivity of the clouds (Book 6 can be a low as 40%). The CO_2 content of the atmopshere may also be elevated slightly (increaaing greenhouse effect) to give the same results.

Human History

Settlement

Serkur was originally settled by the Vilani about c. -3560. It was set up as a farming settlement in order to supply other colonies with grain. Serkur's climate was well suited to this.

Energy was predominantly from hydro-electric, solar and wind, with a few fusion plants imported from nearby high-tech worlds.

During the First Imperium the planet would have been relatively stagnant due to the inherent nature of the Vilani Bureaucratic culture.

Second Imperium

Transfer of rule to Terran extraction. Introduction of Terran culture and language. Freedoms opening due to liberal nature of Terrans.

The benign conditions led to a rapid expansion in population. The planet, with limited industrial base at tech 4, became overwhelmed and the planet was unable to support itself. With an increasing reliance on imports the planet rapidly became a basket case of indebtedness.

The standard of living rapidly fell accompanied by social problems and poverty.

Long Night

Dramatic effects of isolation and Vargr raiding and seizures. Drop in local technology due to removal of imported technology. Have to develop self-sufficient systems to some degree.

Third Imperium

Opening of interstellar trade due to increasing stability and increase of the use of starships. Standard of living increases with exports of agricultural luxuries and imports of high technology and resources.

The War - 1100-1150

Just before the collapse, the existing government, which was based at Rhylos City, overthrown. Nationalists at Canton and Karlor declared independence, starting a major civil war. The imperium collapsed before it could intervene. The war resulted in the planet having a red-zone classification.

There was a heavy loss of life from war and famine. A new and deadly plague killed 70% of the remaining population.

The plague may have been crudely manufactured by one of the three major powers, but it is more likely that it was imported.

During the early period of the War, Vargr would have beeen supplying various sides with higher tech arms.

During the rebellion, Vargr corsairs seized tentative control of the world for exacting toll finance from merchants supplying weapons as well as acting as a base of operations. Part of larger corsair organisation.

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Post Collapse

The population stabalised at 500 million then slowly increased to 700 million at c. [During Cold War or after].

The civil war was a major incentive for technological development causing a progression from TL 4 to TL 5 (ie WWI to WWII technology).

A ceasefire was declared on year 1150. At the time of the ceasfire there were three major powers, each centred on Rhylos, Canton and Karlor. A cold war followed which helped propel the indigenous technology in all three power blocks to TL 7 (ie 1940's to 1970's).

There has been no interest in space-travel, but much development of ICBMs by all three powers.

Each power has a civil service bureaucracy similar to the pre-war planetary government. Each power funds major military and scientific R&D projects.

Serkur has abudant metaliferous and petroleum reserves that was not exploited by the original settlers. Although the planet is less tectonically active than the Earth, geological structures are simple and much larger, hence there are many large oil/gas fields in many of the basins within the landmass. The planet is dense, hence, rich in metals such as uranium and iron.

Since the war there has been an accelerated use of petroleum. Nuclear power is now being increasingly used.

The planet has also become much more industrilaised, hence the importance of the additional energy sources to power them.

The planet during the cold war period has become very prosperous and wealthy.

Vargr History

Vargr have always had a limited presence on Serkur at very best. A Vargr base existed on Serkur's moon Tarro (on the side facing Serkur) up until the time of the collapse. The base was used by Vargr corsairs, whom were oppertunists that made use of Serkur's industrial base.

Its real value to the Vargr was always very limited and as a result thy showed little interest in seriously developing this planet for their own use.

With the arrival of the Virus and the collapse, the Vargr base on Tarros was destroyed.

The xenophobic human population on Serkur killed off the few Vargr that were present at the time. This was the last contact that Serkurans had with the Vargr. The Vargr have not attempted any further contact with the planet Serkur, and for all intents and purposes has been forgotten about.

Geopolitics

Nations

3 Major Superpowers

1. Rhylos — Northwest part of continent
2. Canton — Southwest part of continent
3. Karlor — Eastern part of continent and Northeastern seaboard

Populations

Rhylos	230,000,000
Canton	150,000,000
Karlor	320,000,000
Total	700,000,000

Governments

All three are Civil Service Bureaucracies (Gov 8)

Political Scene

Rhylos

Technological hub. Sees itself as the eventual world government. Republican tendencies.

Canton

Supremists - believe they will eventually conquer Rhylos by force. 'Nazi' tendencies. Is a major threat to Rhylos. Richer in metaliferous resources than the other two powers.

Karlor

The sleeping giant - greater population than the other two powers. More intensive farming and a solid industrial base. Will listen to reasonable offers. Has been 'offside' with both Rhylos and Canton at various times. Is more cash oriented.

Political Structures on Serkur

Rhylos

President — Emeror (figurehead only) - Appointed from a nobility
Senate — (elected by lower house)
Lower House — (elected by masses)
The Masses

Canton

Dictator (Chen)
Inner Party
Middle Party
Outer Party ("ley members")

Proleteriate, (“plebs”)

Karlor

President	Chairman
Lords	Senior Party
Minor Nobles	Major Party

Masses (no say in politics)

Earth Analogues

These are only vague comparisons

Rhylos: Rome, USA

Canton: Oceania (from novel 1984) - easily recognisable

Karlor: Combination of Chinesse and British Monarchy

Military Strength on Serkur

The following is the number of personnel in each branch of the military for each nation on the planet Serkur.

Rhylos

Army	700,000
Navy	100,000
Airforce	50,000

Canton

Army	900,000
Navy	60,000
Airforce	100,000

Karlor

Army	1,200,000
Navy	30,000
Airforce	30,000

Rhylos Military

Navy

Type of unit	Number	Personal/unit
Heavy units (c. 20,000 tonnes)	10	~1500
Medium units (c. 10,000 tonnes)	20	~500
Light units (c. 3000 tonnes)	40	~200
Patrol (c. 200 tonnes)	200	~50
Support		~50,000

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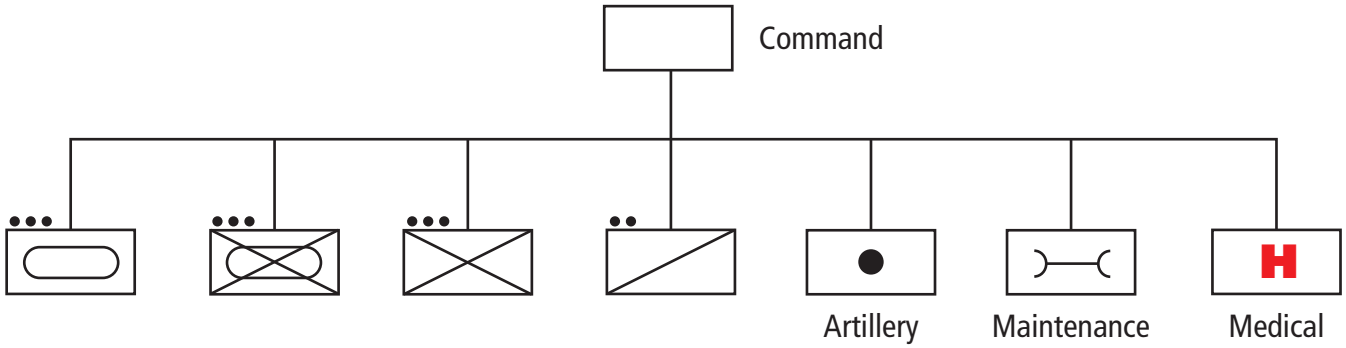
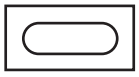
Airforce

Type of unit	Number
fighters	400
fighter bombers	300
recon	60
bombers	200
heavy rockets	200

Typical Rhylorian Army Battalion/Regiment/Brigade (???)



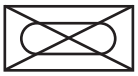
Armoured Company



3 Platoons each of
4 x Heavy tanks

Command Platoon
2 x Heavy Tanks

Mechanised Infantry Company



3 Platoons each with
4 x APC
1 x Command
4 x 4 man rifles + LAW
1 x Light mortar
2 x LMG
1 x ATGW

Command Platoon
2 x APC
1 x Command
2 x Mortars (8cm)
1 x AOP

Motorised Infantry Company

3 Platoons etc with
3 x Trucks
6 x 4 man rifles + LAW
2 x LMG
1 x Command

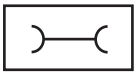
Command
2 x Trucks
1 x Command
2 x Mortars
1 x AOP
2 x ATGW + Reloads AOP

Artillery

3 Batteries of
2 x Heavy Artillery 6/ Battery
1 x S.P. (Self Propelled)
1 x Towed
1 Battery of
6 x Light Artillery (Self Propelled)
6 x Rifles
3 X LMG
3 x Trucks
? Tractors

Command Platoon
2 X APC
Command
Radio

Maintenance Company



5 x Mobile workshops
2 X ARV
5 x Heavy tranporters
80 x mechanics
5 x Heavy trucks
5 x Replacement parts trailers

Medical Company

1 x Field Hospital
~20 x Medics
1 medic per 40 non medics
1 medic per platoon
2 medics per armoured company

Catering Corp

Attached to each company
2 Field kitchens per armoured company
3 Field kitchens per company (non-armoured)

Ed note: It appears the work on detailing this unit was never finished, with one company left out.

Flashpoints

Although there is no actual war between any of the three superpowers (1199). there are a number of flashpoint where violence may erupt. Two such flashpoints are at Pingying City and the New Desert Estates.

Pingying City

Pingying City (population 3.5 million) is the largest city along with the Pingying River. The Pingying River defines the border between Rhylos and Canton from Pingying City down to the coast.

Currently Pingying City is part of Canton, however most of the population is Rhylorian. Pingying City was taken off Rhylos by force during the last major war. The Rhylorian government has a long term desire to reacquire this city. Pingying City and its immediate hinterland is important because the occupation of this area is vital in the control of the middle reaches of the Pingyiong Rover. Canton may use this area as the launching of an offensive against Rhylos.

The New Desert Estates

In the middle of the Great Northern Desert the Rhylorian government has embarked on a major desert rehabilitation programme that intends to turn hostile wasteland desert into fertile new land. Meltwater from the North Polar Ice is sent along the Juno Canal to Newestate (principle city of this project area – population 1.5 million) where it is then distributed.

A large nuclear power plant at Newsestate powers the scheme. The Karlor government feels that this scheme may start to impinge on their territory and want any further development stopped.

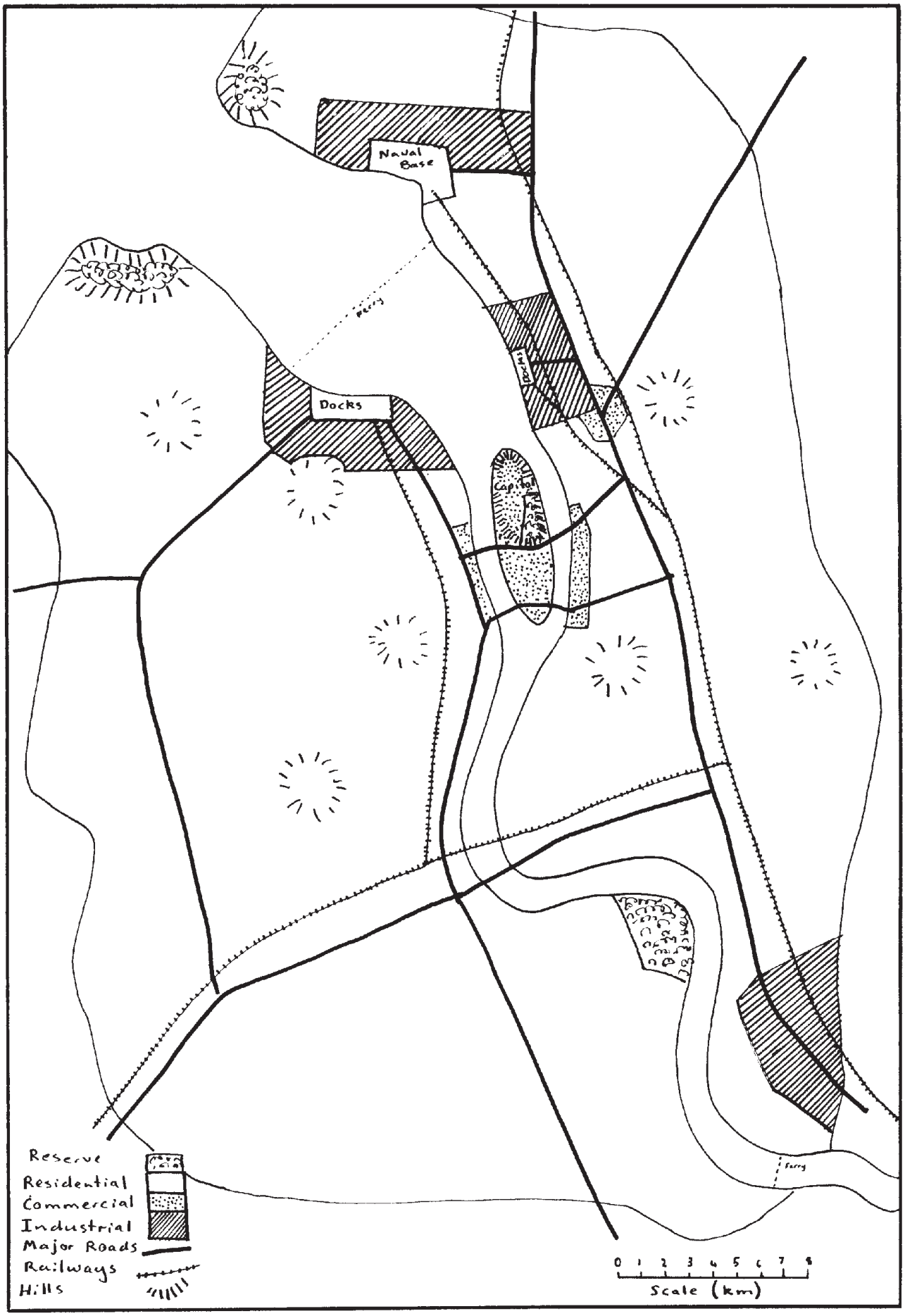
Some elements within Karlor have also expressed reservations about environmental effects.

Scenario hooks

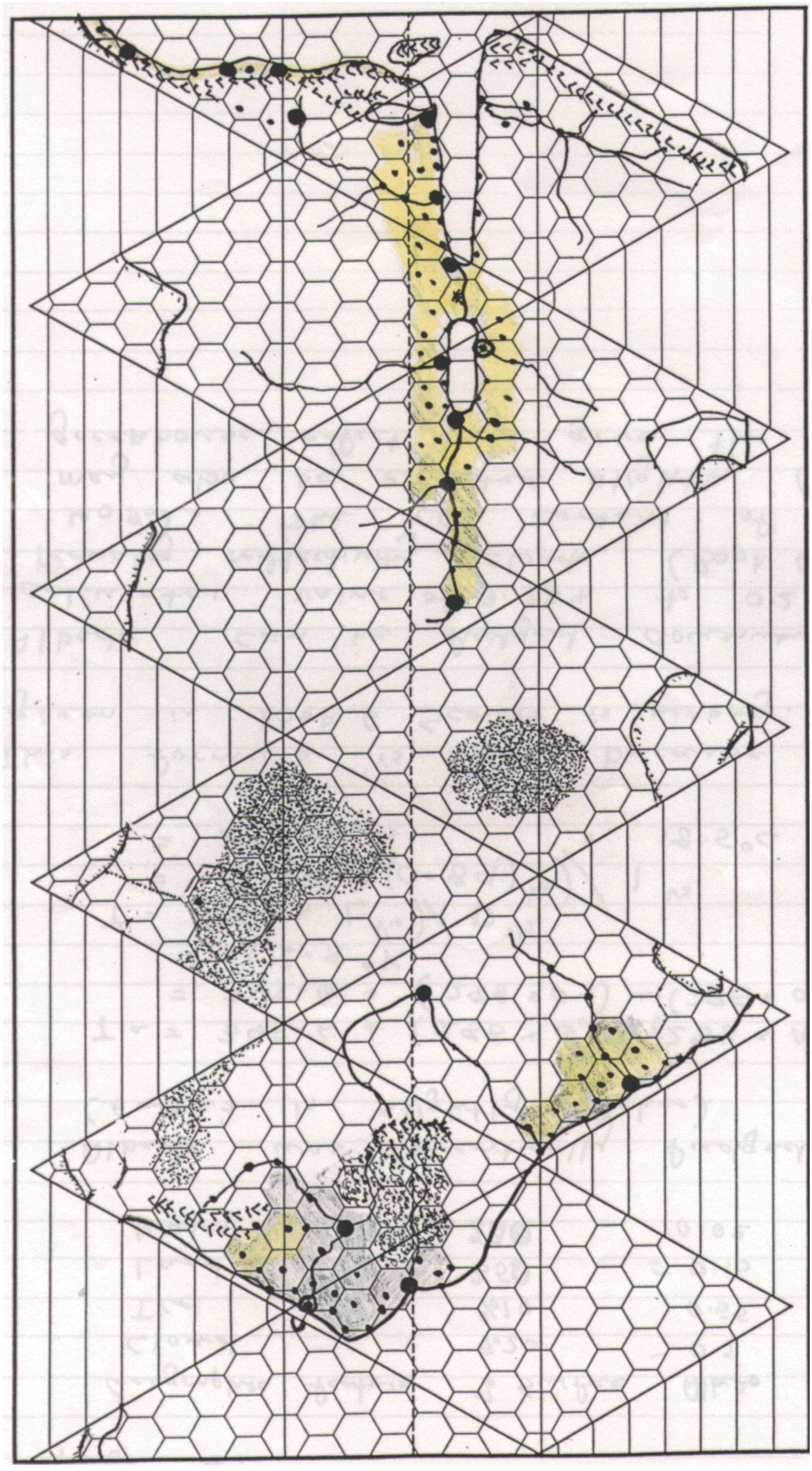
1. A bootleg-Bootstrap scenario where players have colocate and defeat an off world TL 8 auto rifle smuggling ring

2. A New Desert Estates - a party of “trouble-shooters” are hired to investigate threats of sabotage to the operation.

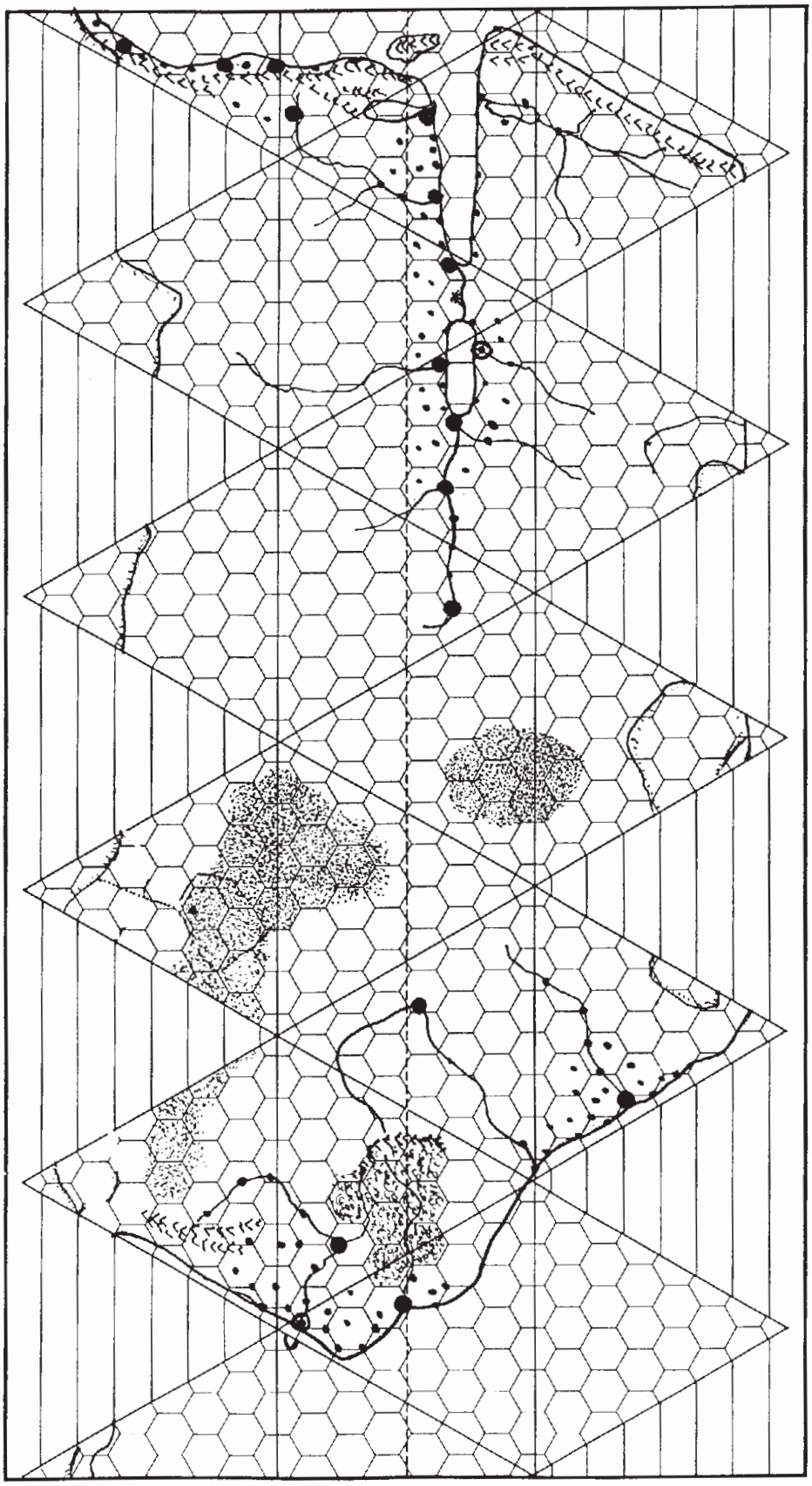
Rhylos City Map



World Maps



WORLD MAP



World Name
Serkur

UWP
x 364 873 7 722 G2V Red

Hex Scale in km
(3000 km/sector)
426 km/hex (64 km/mm)

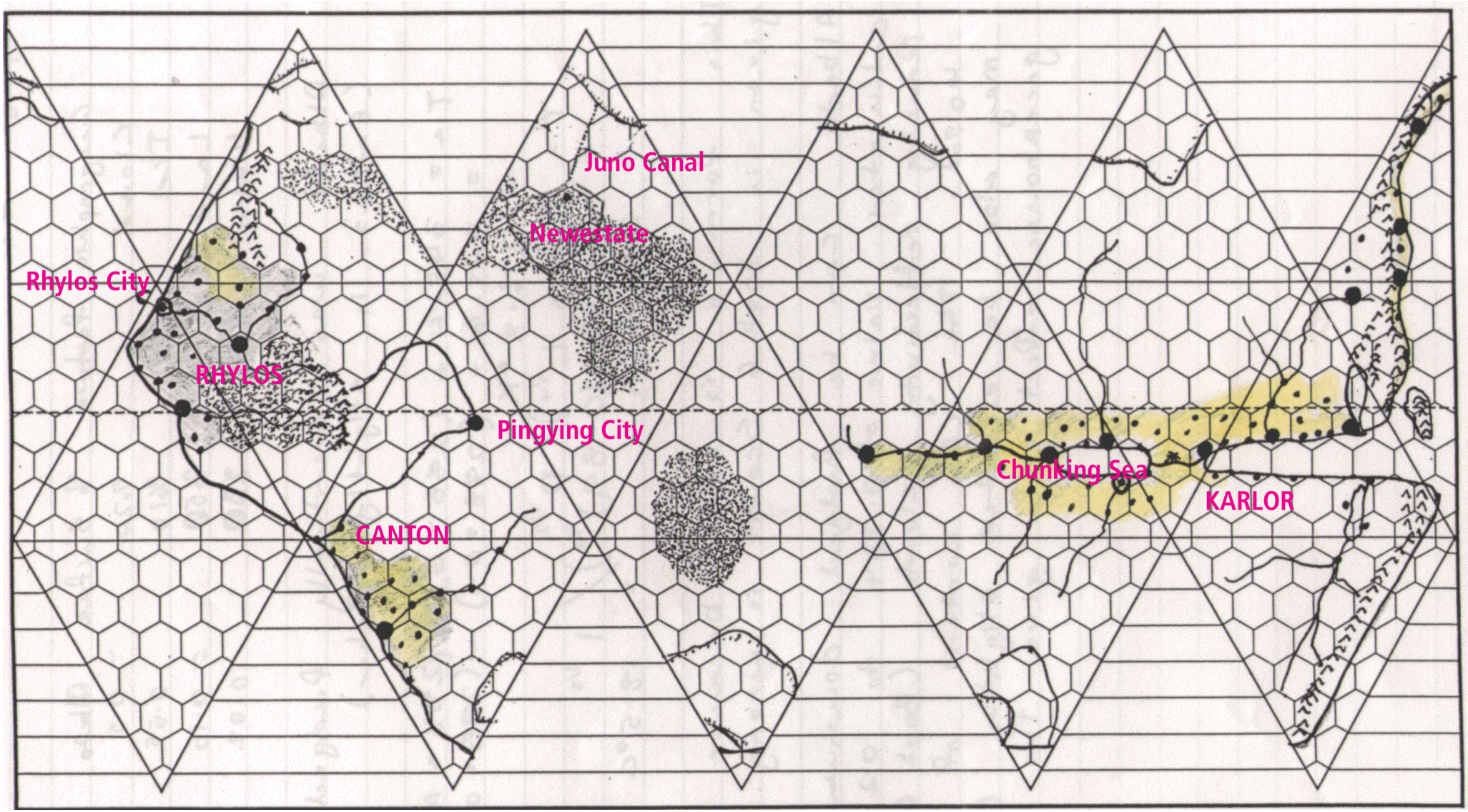
LEGEND
- Mountain Range
- Ice-Cap
- Desert
- Forest
- Major (navigable) rivers

CITIES
- 50 000 000
- 20 000 000
- 5 000 000

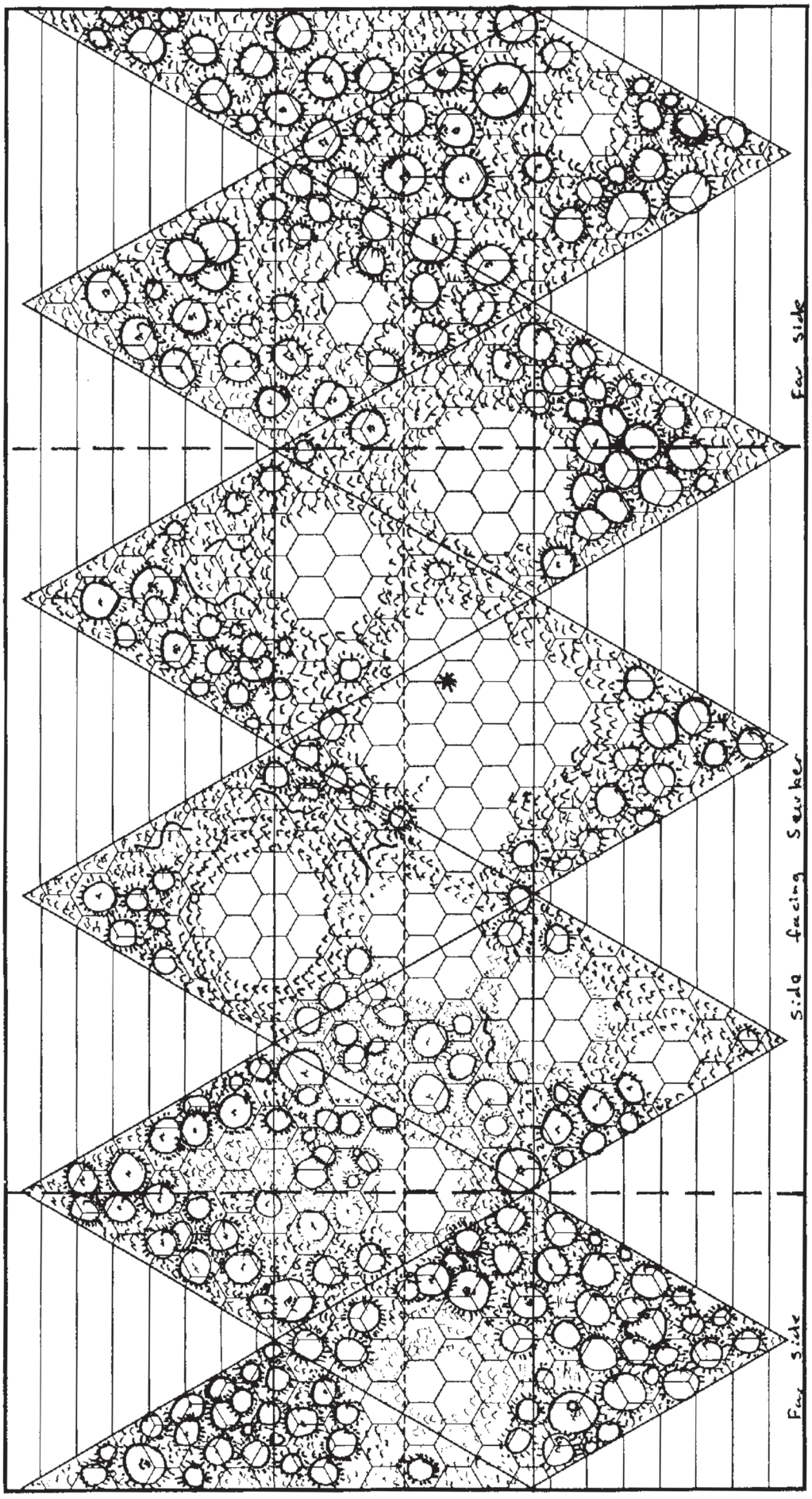
Hexs with more than 100/km²

C Capital

Each hex ≈ 157163 km²


Juno Canal
Newestate
Rhylos City
RHYLOS
Pingying City
Chunking Sea
KARLOR
CANTON

Tarro Moon Map



World Name
Tarro
(Surkur's Moon

UWP
Y100000-0
Tidelocked.

Hex Scale in km
160 km/hex (23.9 km/hex

* Ranger base ruins

Maria (Volcanic plains)

Craters

Highlands etc.

Rills

The New Estates Computer Virus

The Concept

The following is a set of notes about the computer Virus in the New Estates control computer, and includes some of the PR points the Rhylorians will talk about with outside contact sources once they learn what the Virus is. This account is not entirely accurate because of that.

The computer is a main control center of the Rhylorian government's (Planet Serkur) New Estates project - a project designed to turn desert wasteland in the far east of that country (near the Karlor border) into fertile agricultural land. This is a de-desertification project, not a terraforming project.

The New Estates project was the brainchild of the Rhylorian government engineer Vladros Rammanos who spent nearly 20 years developing the systems that would operate and maintain this project. Rammanos, unfortunately had a nasty accident a few weeks prior to the system going online and then mysteriously dissappeared.

Early History of the Project

20 years prior to the project going online, a Kisiidi ship (TL-9) mysteriously vanished in the Arena Subsector. The ship was probably a 400ton Anvil class explorer (a deliberate fabrication of the truth - it was a rebuilt Vargr vessel in use by the Kisiidi). The ship crashed onto the planet Serkur and was half buried in sand dunes near where the New Estates project was to take place.

The timing of the crash was at a stage where the Serkur inhabitants were sufficiently advanced to have a go at understanding the technology onboard.

The ship is believed to have visited a mine site prior to crashing where it was boarded by a robot infected by a co-operative strain of the Hobbyist virus. The ship then crashed delivering it's technology and a seed containing the virus to Serkur.

It is interesting to note that the Isiidi (citizens of Kisiidi) use neural jack technology. The TL 9 computers of the starship recovered by Rhylos are very ROM based interfaces through some complex technology with human brains on the other end. This technology was subsequently carefully examined by the Rhylorian technical staff working on the project.

In truth a lot of assumptions about Kisiidi technology are wrong given the ship contained a lot of salvaged Vargr technology at the time. It happened to be integrated with some Kisiidi technology.

What is the Nature of the Serkur New Estates Virus

After his crash and mysterious dissappearence, Vladros Rammanos was effectively a quadraplegic. It was then quickly decided that his brain would be used as a part of the processing facility of the computer. The body was still attached to the brain and the computer interacted via neural jacks. His body is fed by IV's. The world regarded him as dead, however he could still contribute to his work in this new form.

The computer was devised from many years research on the Kisiidi ship, and it will be claimed special work was done on the Virus (effectively an attempt at "Genetic Engineering" on the Virus)

to alter it so that it could be used in running the computer. This was also claimed to be very risky and very special precautions were taken.

These parameters are known about the virus:

-The computer became sentient after going online

-The Virus is a data-entity (?) - it cannot recognise hardware

-The Virus is a mutant co-operative version of the Hobbyist strain. It sees itself as co-operating with this brain

-The virus inhabits the computer and takes on the personality of Vladros making this computer sentient

-It is a constructive use of the Hobbyist strain ie: it is interested in running the operation as an experiment in "greening" the desert.

-The human brain enhances the decision making of the computer – something that computers traditionally have difficulty in doing, thus combining the best of both worlds.

The virus is used to co-operating with other entities (virus) on working on problems, so it will be able to interact with the human brain.

Also note (and this must be stressed), that this computer is contained with no interaction from the outside. There is very tight security present. It is well known (another false claim), even to Rhylorians of the nature of how viruses can seed eggs, that many then spread into other systems. Special procedures are in place to isolate the computer so that viruses can't get out. No electronic media is allowed out of the complex (including data transmission).

One point that needs to be considered is if the virus a data entity only can it reconfigure hardware (eg: overprint it's own circuitry on chips) with the technology available on Serkur (domestic or salvaged)?

If it can, then this opens up many possibilities and a pandora's box.

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Kisiidi Vessel

The Kisiidi vessel (or salvaged Vargr origin) which was surveying Arena Subsector in 1180 would have been TL-9 and would have had a mixed Human/Droyne crew (and possibly Vargr from Tokho). While surveying a reasonably high tech Vargr world (a Virus Community), they were boarded by hostile robots.

These robots were designed as insertion combat units for taking hold of the ship. Each acted as a carrier for a virus seed to be inserted into the ship's computer systems. Because of some of the Kisiidi precautions they managed to escape and then jump but not without internal infection.

When they arrived in the Serkur system the infection would have crippled drives and power thus forcing the ship into a crash. The result would be a non-functional vessel with extensive damage. The ship would not hold an active virus, but one of the 'injected' virus seeds.

IT should also be pointed out the Rhylorians claim their were no survivors - but is that true?

The locals would be able to piece together technology from analysis to build crude versions of it's electronics (TL 8 instead of 9) using salvaged parts and the neural jack technology (which was actually higher technology installed in the rebuilt Vargr vessel in question). At the same time the seed would be inadvertantly transfered to the computer based on the Kisiidi electronics.

Knowledge of Virus Problems

The New Estates background indicates the locals know all about the Virus and every precaution to contain it as well as detecting the virus seed in the remains of the Kisiidi vessel. It must be asked how they know all this? The Kisiidi are unlikely to believe them, but other gullable starfarers just might.

During the crash when the virus first hit this world was lower tech and had no ability to comprehend how software constructs and hardware for advanced computing systems were supposed to work. Only the Vargr overlords knew but were wiped out far earlier. Crash effects to Serkur were not the result of loss of interstellar contact and trade, but local war.

Since the virus hit and the arrival of the Kisiidi vessel, no other interstellar contact is shown. So where did the Serkurians learn all this advanced anti-virus information? Certainly not even the Kisiidi at the time knew enough to protect themselves even when they had consistent dealings with the virus and were higher tech at the time. Did the Rhylorians have captive survivors from the crashed ship? People with more advanced knowledge?

Tailoring the Virus

The Rhylorian New Estates claims go even further to explain how the virus was modified by the locals to suit their purposes. This is an outstanding feat. One that has only been duplicated by the Regency/Domain of Deneb and the Hiver Federation with their TL16+ computer technology. How does a TL 7 world with some junked TL 9 manage something that a TL 12+ might only start the rudiments of experimentation on.

This claimed concept goes beyond the bounds of the technology and resources available to this world, even the sector. It must be remembered that this sector was only ever TL 14 at best with all these destroyed bar the world on which the Fascists have their capital.

Moderated Approach

It is most likely the claims of the New Estates project is a PR piece eventually formulated once formal contact is made with outsiders like the Tokho Union or Kisiidi and the nature of the Virus is actually uncovered.

The following outline is a more believeable version of events.

After studying the Kisiidi ship the government decides to use the salvaged technology and usable components in constructing a more advanced computer. Since the technology could prove to be unreliable they use it on a non-strategic project, ie the New Estates. To help ensure that opposing governments or subversive elements don't get the technology they have a complete security blanket with the listed procedures. After all, imagine what would be done with a UFO on Earth today.

The prototype computer uses Serkurian components, hybridised components based on analysis of Kisiidi parts and usable salvaged parts. Because of this the virus seed is in the system in one of the salvaged parts. The locals aren't aware of the virus since it has done nothing since the computer isn't online and has only gone through test procedures.

With the crippling of the engineer he is neural jacked and hooked to the system with a number of design changes.

The switch is flicked and the system is online. A period of time is given to get it operating simulations for the project.

During this period the computer becomes sentient. This is attributed to the synthesis of the new parrallel architecture with the synaptic responses of the human brain. Soon it takes on some of the personality traits of the engineer.

Thus no one suspects a virus. Any glich is attributed to disparities in man-machine interfacing.

However the real story is that the virus has slowly built itself up at the same time the engineer begins grappling with his new environment. The two entities communicate and take on various of each others traits while they gain mastery of the system. When both reach maturity they respect each other's space and work together on their common interest. The virus has developed this interest due to it's nature (hobbyist) and the environment it grew up in. ie the data hooked to the machine, it's initial programs and the engineers thought patterns. Glitchs would occur only when the two entities had a difference of opinion and couldn't agree on a result.

Thus we have achieved the tailored result without the locals having knowledge and abilities beyond reason. This also lets more intrigue occur about the virus and brings it to be an ultimate threat if were ever to escape.

Given the superb performance of this system, the government will keep it tightly under security until it can be perfected, tested and evaluated for making more for military purposes.

Of course more conspiracy sits under this. Did any crew from the ship survive? If so are they still alive today? Have they helped the locals, or been forced into service? When did the Rhylorians uncover they have a strain of the Virus on their hands? And why will they begin talking up their capabilities?

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New Era Notes

The details regarding the world did not change from 1110 to 1115 in the lead up to the Rebellion era. It remained a non-aligned human world during that period.

Classic

Political tensions had spilled over into active civil war on this world around 1100, and it was considered unsafe for civilian travellers.

Main world stats circa 1110

Serkur	2114	X364983-4	Hi	R	722	Na	G3V

Rebellion

Political changes in the Varson subsector (subsector G of Meshan sector) and sector wide saw this world become part of the Ruler of Five state in 1116 through being annexed by corsairs operating for the state. Vargr corsairs established a base on Serkur's moon Tarro shortly after it was annexxed. The civil war on the planet was in full swing with three main powers contesting control. Offworld authorities still recognised only one planetary government, especially given most of the contesting parties were operating fragments of the original global civil service bureaucracy.

Main world stats circa 1120

Serkur	2114	X364983-4	C	Hi	R	722	V5	G3V

New Era

The world was heavilly depopulated, mainly through it's own war and to a minor extent by the actions of Virus infected offworld starships. The corsair base on the moon Tarro is now empty. The world has settled into 3 relatively stable governments and advanced in technology through their century of war. All local nations are government code 8.

Main world stats circa 1200

Serkur	2114	X364873-7	Ri Ag Bk	722	Na	G3V

Standard Powerplants on Serkur

These are the standard powerplants used on the planet Serkur. The smaller ones may be used to power certain vehicles; the larger powerplants may be used to pump electricity in to the national (planetary!) grid. This table was produced with the intention of having a selection of pre-generated powerplants that could be plugged into any vehicle designed for this planet. It is the intention in future to also put together similar tables of standard hulls for AFV's etc and weapons, which should greatly speed up any future vehicle designs.

Type	Output (MW)	Vol. M^3	Mass	Cost	Fuel Kl/hr	MCr Fuel/hr
IICE - TL6	0.004	0.01	0.01	0.00002	0.001	0.0000002
IICE - TL6	0.01	0.025	0.025	0.00005	0.0025	0.000000625
IICE - TL6	0.1	0.25	0.25	0.0005	0.025	0.00000625
IICE - TL6	0.4	1.0	1.0	0.002	0.1	0.000025
IICE - TL6	0.5	1.25	1.25	0.0025	0.125	0.0000321
IICE - TL6	0.75	0.875	1.875	0.00375	0.1875	0.0000468
IICE - TL6	0.8	2	2	0.004	0.2	0.00005
IICE - TL6	1	2.5	2.5	0.005	0.25	0.0000625
IICE - TL6	1.5	3.75	3.75	0.0075	0.375	0.0000936
IICE - TL6	2	5	5	0.1	0.5	0.000125
IICE - TL6	4	10	10	0.02	1	0.00025
IICE - TL6	5	12.5	12.5	0.025	1.25	0.000312
IICE - TL6	10	25	25	0.05	2.25	0.000625
GasTur TL7	0.25	0.5	0.5	0.0025	0.0075	0.0000187
GasTur TL7	0.5	1	1	0.005	0.15	0.0000375
GasTur TL7	1	2	2	0.01	0.3	0.000075
GasTur TL7	2	4	4	0.02	0.6	0.00015
GasTur TL7	4	8	8	0.04	1.2	0.0003
GasTur TL7	5	10	10	0.05	1.5	0.000375
GasTur TL7	10	20	20	0.1	3.0	0.00075
GasTur TL7	20	40	40	0.2	6.0	0.0015
GasTur TL7	50	100	100	0.5	15	0.00375
GasTur TL7	100	200	200	1.0	30	0.0075
StmTur TL5	0.35	1	2	0.002	0.0525	0.0000131
StmTur TL5	0.7	2	4	0.004	0.105	0.0000262
StmTur TL5	1.0	2.86	5.72	0.00572	0.15	0.0000375
StmTur TL5	2.0	5.72	11.44	0.01144	0.3	0.000075
StmTur TL5	10	28.6	57.2	0.0572	1.5	0.000375

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StmTur TL5	50	143	286	0.286	7.5	0.001875
StmTur TL5	60	171.5	343	0.343	9	0.00225
StmTur TL5	100	286	572	0.572	15	0.00375
StmTur TL5	600	1715	3430	3.43	90	0.0225
StmTur TL5	1000	2860	5720	5.72	150	0.0375
NucTL7 57t	12	20	160	2.0	3 Kl/yr	4.275 MCr/yr
NucTL7 285t	60	100	800	10	15 Kl/yr	21.375 MCr/yr
NucTL7 2850t	600	1000	8000	100	150 Kl/yr	213.75 MCr/yr

Notes

IICE - TL6: Tech Level 6 Inproved Internal Combustion Engine powered by hydrocarbon distillates

GasTur TL7: Tech Level 7 Gas Turbine powered by hydrocarbon distillates

StmTur TL5: Tech Level 5 Steam Turbine powered by hydrocarbon distillates

NucTL7 57t: Tech Level 7 Nuclear Fission Power Plant - consumes 57 tonnes of radioactives fuel per year

Output (MW): The power output of the particular engine in MW

Vol M^3: The volume of the powerplant in cubic metres

Cost: The cost of the powerplant in MCr

Fuel kl/hr: Fule consumption of the powerplant in kiloliters of fuel per hour

MCr Fuel/hr: Cost of fuel for a particular powerplant on a per hour basis - very useful if you want running costs.

Electricity Generation

An interesting exercise was to compare the relative generation costs for some of the powerplants to see if they were reasonable.

TL5 Steam Turbine 600MW

Running cost/year = 197.1 MCr (thats 788400 kl/year, 2365200 tonnes HCD per year)

(assumes 8760 hrs/standard year)

Cost to build: 3.43MCr

TL7 Nuclear 600MW

Running cost/year = 213.75 MCr (see table above)

Cost to build: 100 MCr

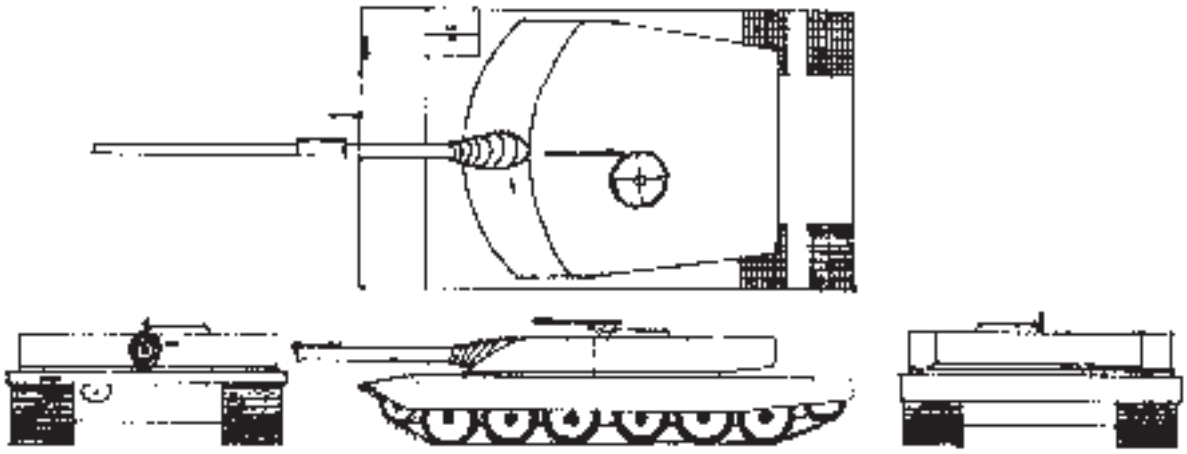
Nuclear powerplants are more expensive to build and run! under these rules. Lets take the worst case scenario - a nuclear plant costing 100 MCr to build and 231.75 MCr/year to run.

Running costs alone are 0.0000406 MCr/MegaWattHour (0.0406 Cr/kWhr).

Adding in the cost of building the plant averaged over 20 years life expectancy plus interest and other running and maintanence costs (eg: wages) one would expect a generation cost of about 0.1Cr per kWhr which is about what we pay today (*Ed:* early to mid 1990s in New Zealand dollars).

Rhylorian Military Vehicles

TL 7 Defender MBT (Main Battle Tank)



TL:	7	
Price:	181,745 Cr (includes Ammunition and fuel)	
Size:	98 klitres = 7 displacement tons	
Mass:	94.7412 tonnes empty, 108.6673 tonnes loaded	
Power:	2.004 Mw	2 Mw TL 7 gas turbine
		0.004 Mw Improved internal combustion engine
		Auxilary powerplant
Maintenance:	36 points	
Controls:	Basic Mechanical	
Communication:	1 x 3 km radio	
	1 x 30 km radio (command vehicle)	
Sensors:	LA Scope	Searchlight
	PIR Scope	Headlights
Life Support:	Overpressure System	
Cargo:	None	
Crew:	3	Driver, Gunner, Commander
Passengers:	None	
Fire Control:	Laser Rangefinder at gunners station	
Armament:	1 x 100mm/L65 TL 7 Smoothbore Hyper-velocity gun	
	1 x Pintal Mounted 13mm HMG	
	1 x Hull Mounted 13mm HMG	
Stabilisation:	Good, (twice safe speed)	

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Ammunition:	50 x rounds 100mm	40 x APFSDS	14,580cr
		10 x HE	2580cr
	20 x 100 round belts 13mm	5000cr/full load	
Other Systems:	None		
Speed:	Maximum road speed:	53km/hr	
	Cross country:	42km/hr	
	Travel mode:	105/85	
	Combat mode:	25/20	
Fuel Capacity:	13.4201 klitres HCD (Diesel) 3183 Cr		
Fuel Consumption:	1.2025 klitres/hr (endurance: 22.27 hrs)		

Combat Stats:

Configuration:	Turreted	TF: 104	HF: 104
Suspension	T 14	TS: 12	HS: 12
		TR: 12	HR: 12
		Deck: 12	Belly: 12

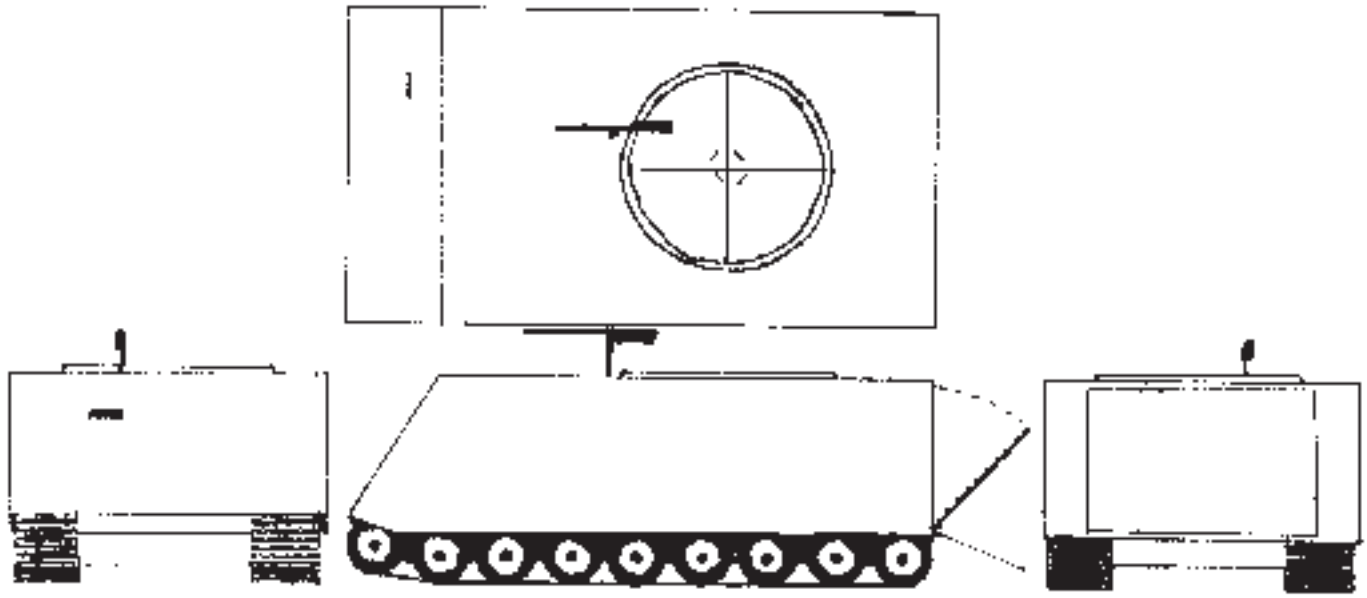
Weapons

100mm/L65 hyper velocity SB gun

Rds	ROF	Cburst	Dam	Pen	Dang	Short	Price	AmWght
APFSDS	6 turns	-	22	118/108/98/78	-	546	315	21kg
HE	6 turns	C:29 B1	15	9C	-	356	210	21kg

Weapon	ROF	Dam	Pen	Mag	SS/Burst	Short
MMG-7 7mm	5	7	2-2-3	100B	2/5	60

TL 7 Protector APC



TL:	7	
Price:	53,105 Cr (includes Ammunition and fuel)	
Size:	70 klitres = 5 displacement tons	
Mass:	45.767 tonnes empty, 50.183 tonnes loaded	
Power:	1.2 Mw 1.2 Mw TL 7 gas turbine	
	Radio powered by 0.0001 Mw battery for 100 hours	
Maintenance:	17 points	
Controls:	Basic Mechanical	
Communication:	1 x 3 km radio	
Sensors:	None	
Life Support:	Overpressure System	
Cargo:	None	
Crew:	2 Driver, Commander	
Passengers:	9	
Fire Control:	None	
Armament:	Pintal Mounted 13mm HMG	
Ammunition:	10 x 100 round belts 13mm	2500cr/full load
Other Systems:	None	
Speed:	Maximum road speed:	67km/hr
	Cross country:	54km/hr
	Travel mode:	31/25
	Combat mode:	135/110
Fuel Capacity:	4.316 klitres 1079 Cr/full tank	
Fuel Consumption:	0.36 klitres/hr (endurance: 11.99 hrs)	

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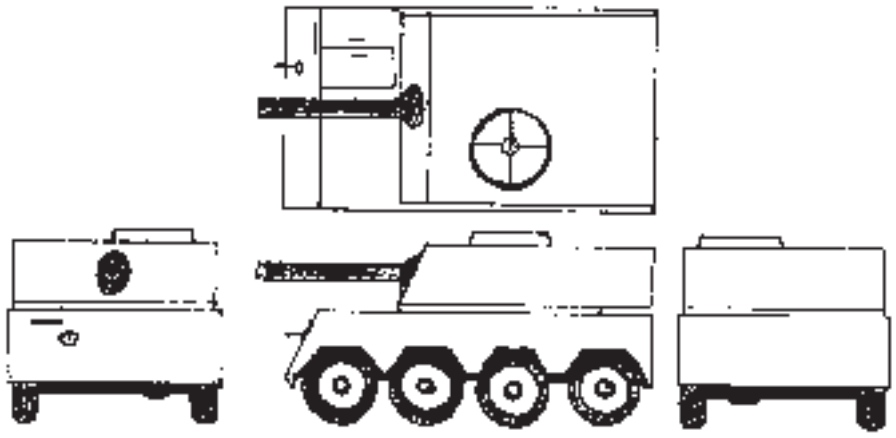
Combat Stats:

Configuration:	Turreted	HF: 12	
Suspension	T 14	HS: 8	
		HR: 8	
		Deck: 8	Belly: 8

Weapon	ROF	Dam	Pen	Mag	SS/Burst	Short
HMG-7 13mm	5	7	2-2-3	100B	2/5	60

TL 7 Ferret Recon LBT (Light Battle Tank)



TL:	7	
Price:	42,320 Cr	
Size:	28 klitres = 2 displacement tons	
Mass:	10.4527 tonnes empty, 12.932 tonnes loaded	
Power:	0.4 Mw Improved internal combustion engine	
Maintenance:	4 points	
Controls:	Basic Mechanical	
Communication:	1 x 30 km radio	
Sensors:	None	
Life Support:	Overpressure System	
Cargo:	None	
Crew:	2	Driver - also acts as gunner (tank cannot shoot while moving)
		Commander - also acts as loader
Passengers:	None	
Fire Control:	optical	
Armament:	1 x 7cm/L40 TL 7 gun	
	1 x Hull Mounted 7mm MMG	
Stabilisation:	None	

Ammunition: 50 x rounds 7cm (40 x HEAP, 5 x WP, 5 x ILLUM)
10 x 100 round belts 7 mm

Other Systems: None

Speed: Maximum road speed: 93km/hr
Cross country: 37km/hr
Travel mode: 3/17
Combat mode: 106/74

Fuel Capacity: 2.1193 m3 (550cr)

Fuel Consumption: 0.25 klitres/hr (endurance: 21.993 hrs)

Combat Stats:

Configuration:	Turreted	TF: 36	HF: 36
Suspension	W (3)	TS: 4	HS: 4
		TR: 4	HR: 4
		Deck: 4	Belly: 4

Flotation: Will float

Weapons

7cm/L40 gun

Rds	ROF	Cburst	Dam	Pen	Dang	Short	Price	Ammo Weight
HEAP	1	-	5C	49C	-	251	90	6
WP	1	-	2C	-	-	251	120	6
Illum	1	441m	-	-	-	251	60	6

MMG-7 7mm Mag 100B (*Ed*: author never provided full specs for this weapon. those that appear in *The Meshan Saga* issue 1 are infact wrong, and are those for the HMG-7 13mm in use by the APC)

Online topics

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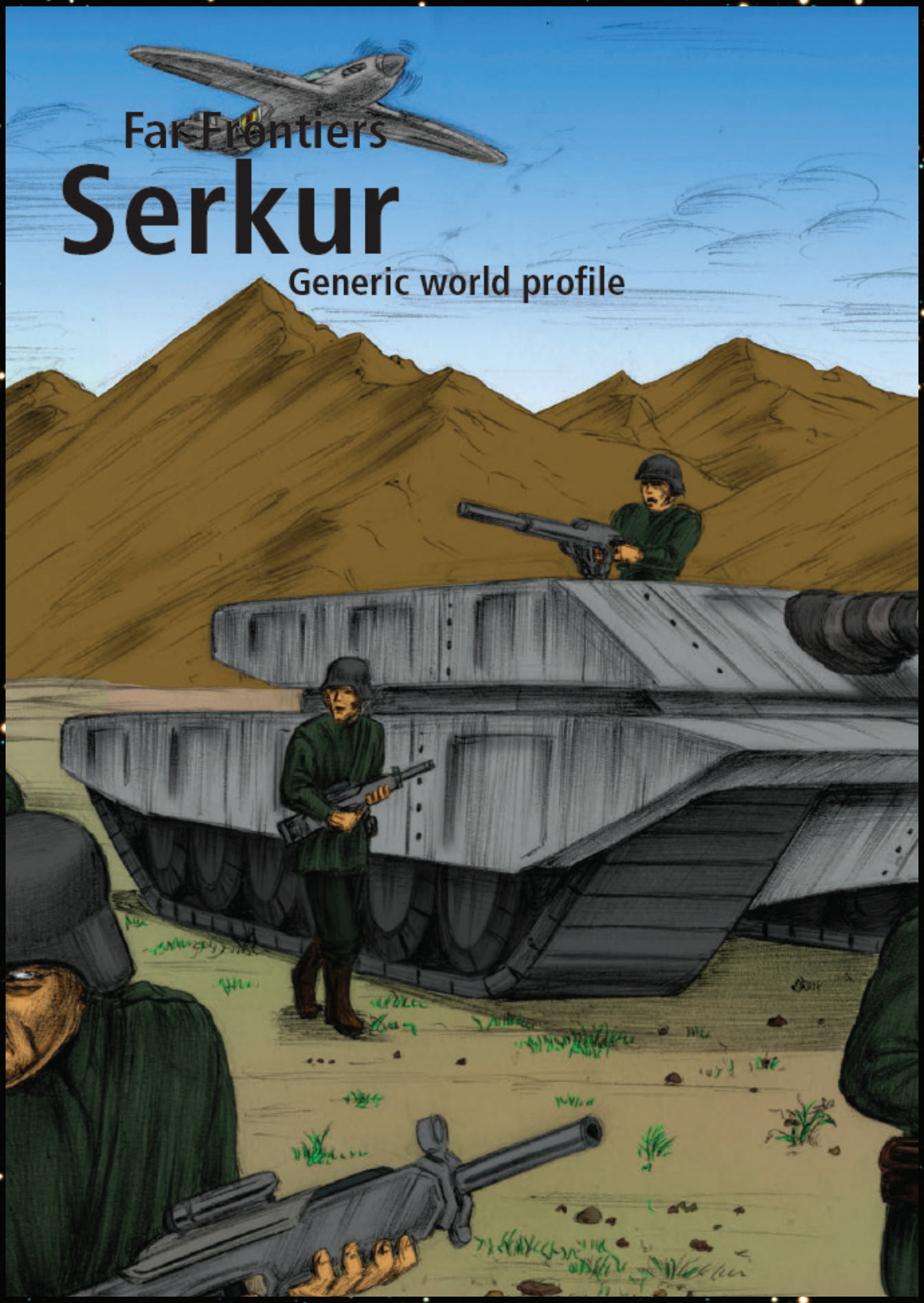

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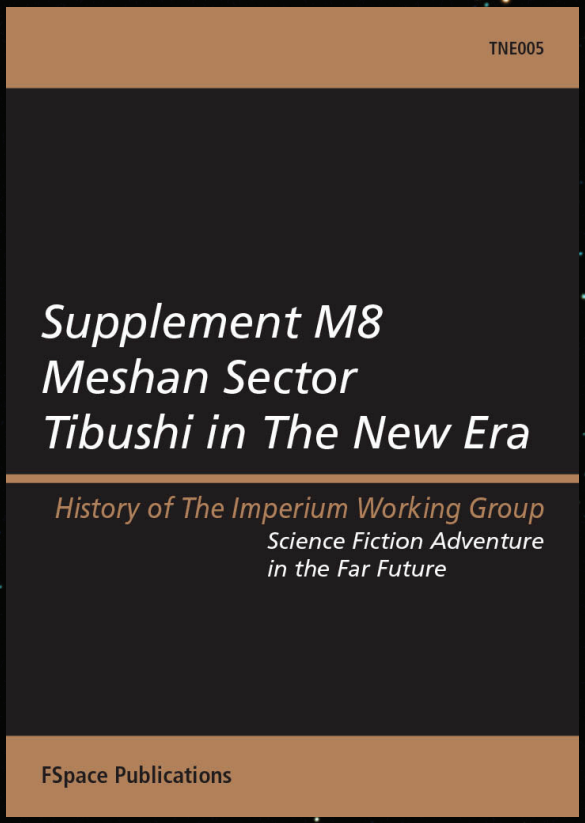

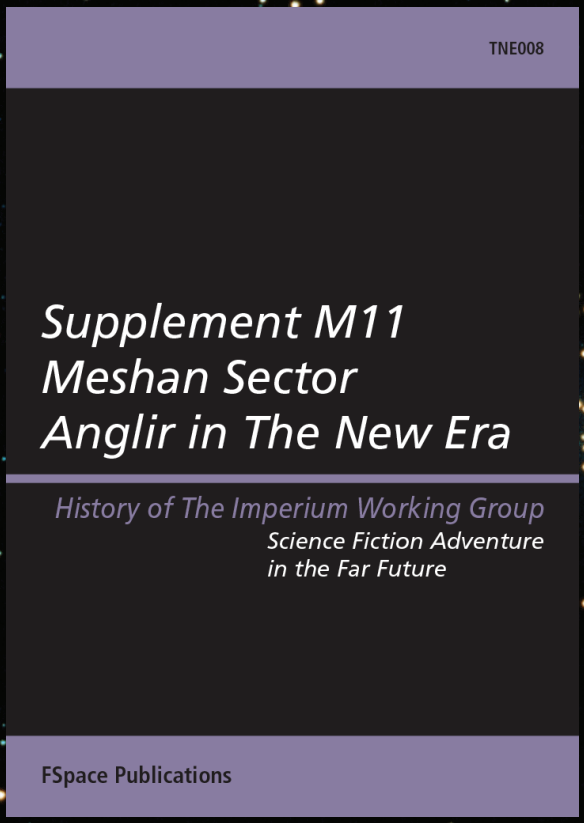

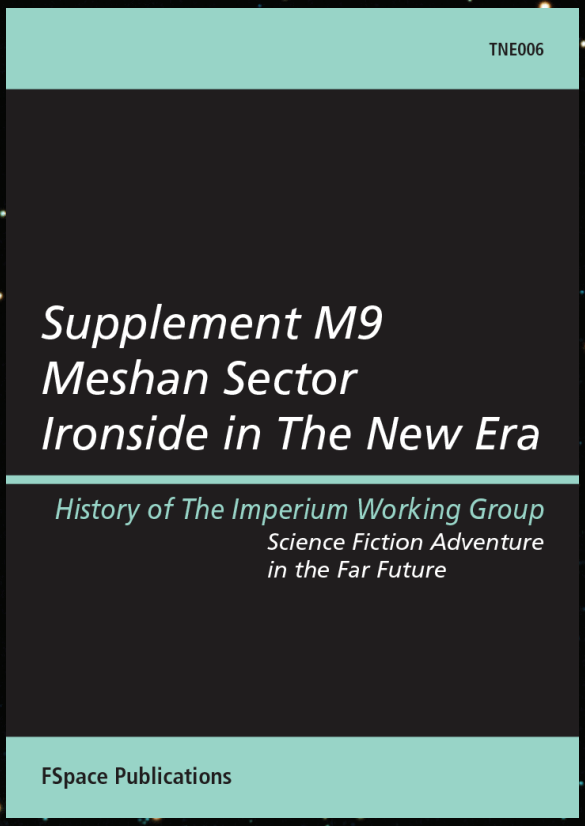

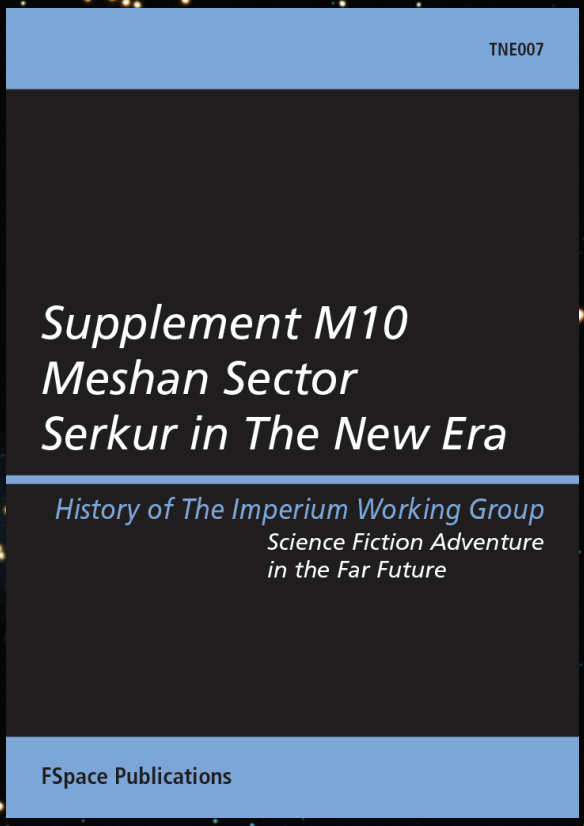

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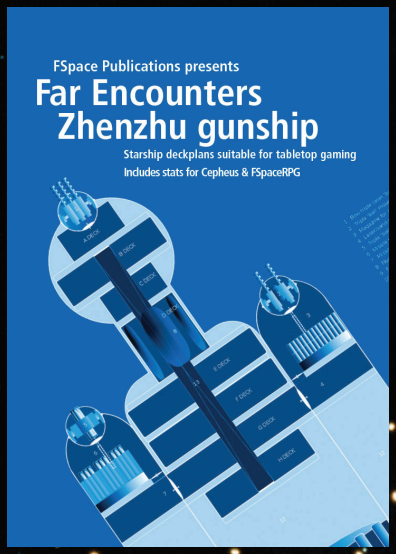

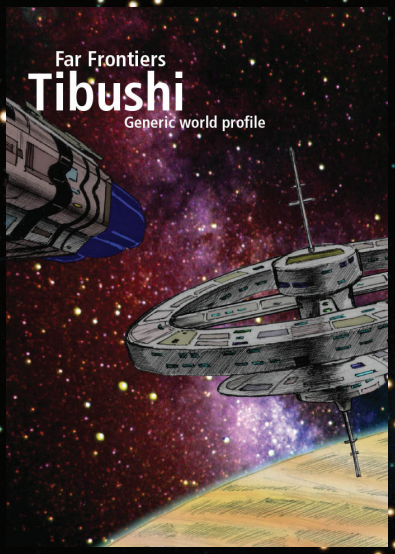

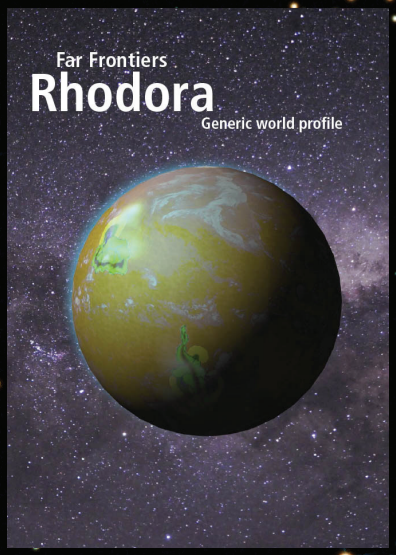

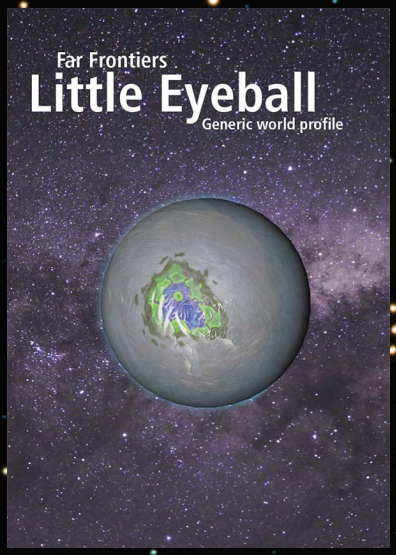

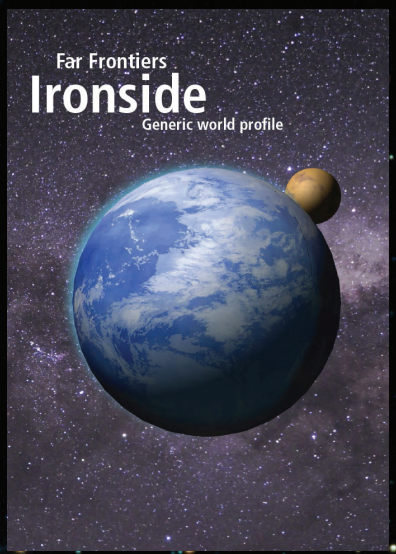

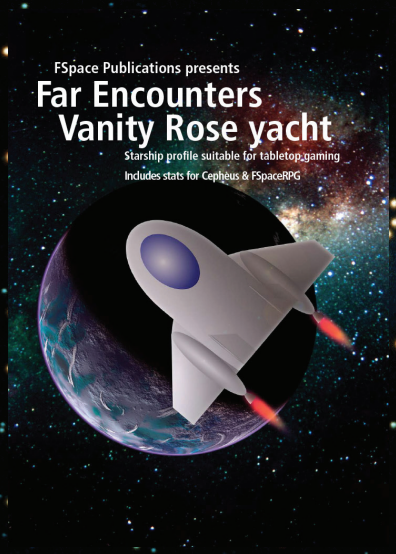
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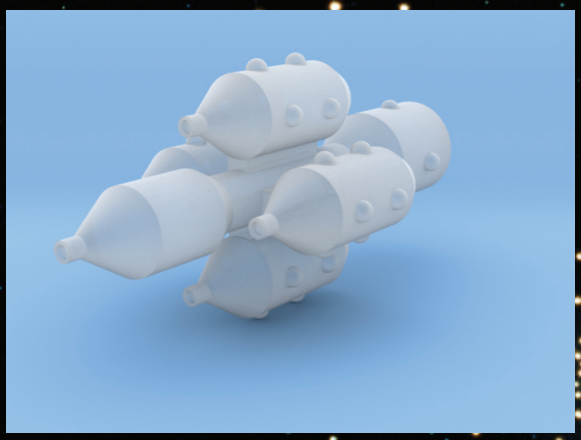

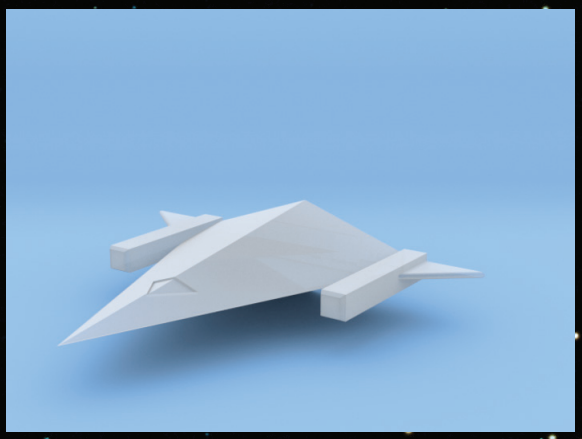

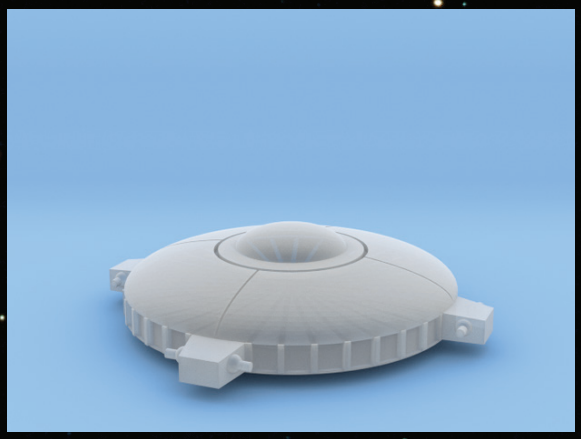

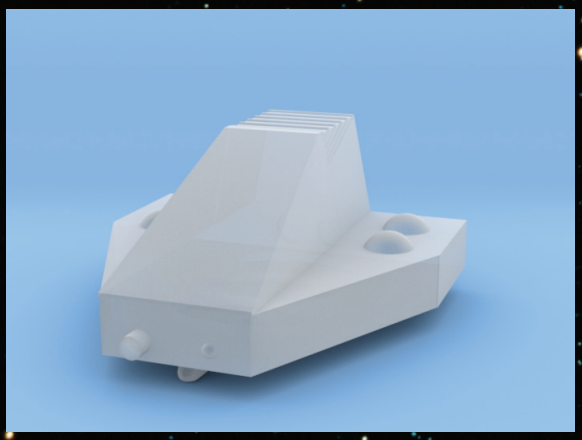

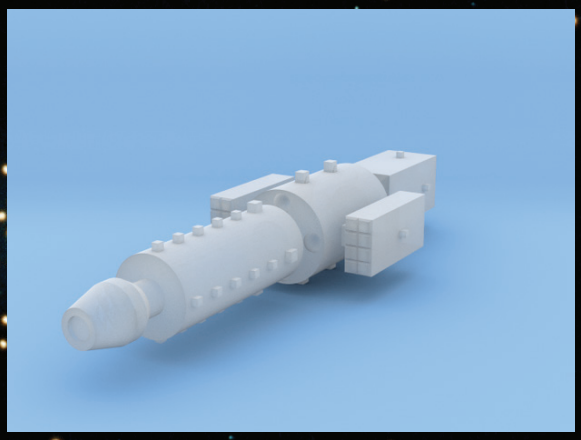

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